

SUBTERRANEA BRITANNICA

SECRETARY'S NEWSLETTER NO 19

1997

Welcome to:

W. Aird, London
R. Austen, Worcestershire
M. Bennett, Kent
R. Cook, USA
D. Dodwell, Yorkshire
T. Edwards, Coventry
I. Finegan, Oxfordshire
N. Garside, Cheshire
H. Willis Fleming, London
D. Gibson, Leeds
L. Hopkins, Essex

M. Ismail, Kent
H. Martin, Bedfordshire
N. McCamley, Wiltshire
R. McKilop, Kent
M. Millen, Yorkshire
H. Morgen, Wiltshire
M. Powell, Kent
J. Saberi, Surrey
J. Silvertant, Netherlands
J. Shere, Cambridgeshire
P. Waterton, Hampshire
A. White, Yorkshire

NOTICE BOARD

WINSFORD

Some people were unable to attend the salt mine visit at Winsford in 1997. Anyone wishing to go on a waiting list for a further visit should send their name address and telephone number to:

Sylvia Beamon, 2 Morton Street, Royston, Herts, SG8 7AZ

JUBILEE LINE

Please send, name, address and telephone number, for a proposed visit to the Jubilee Line in London under construction to:

Sylvia Beamon, 2 Morton Street, Royston, Herts, SG8 7AZ

ICE-HOUSE BOOKS FOR SALE

The Ice-Houses of Britain by Sylvia Beamon and Susan Roaf is still for sale at 30 pounds sterling including post and packing. Formerly cost 120 pounds sterling
Apply:

Sylvia Beamon, 2 Morton Street, Royston, Herts, SG8 7AZ

EAST SURREY MINES WEEKEND

A summer weekend mainly, but not entirely, for the mines enthusiasts. Arranged by Stuart Goldsmith of Wealden Cave and Mine Society. Based mainly, but not exclusively, on camping. Could possibly become an annual event

Ring Stuart Goldsmith: Home 1342 314 999
Work 01903 834 869

DAY CONFERENCE

Next one should be at Royal School of Mines on March 1998 but we are having difficulties with venue because price of hire of lecture theatre may have risen steeply.

1998 STUDY WEEKEND

Will be in Nottingham during last or penultimate week in July

TRIP TO NORTHERN FRANCE

It is proposed to arrange such a one or two day trip in May. It will be a minimal organisation trip - just a coach going from site to site provided.

Details later

Abandoned Mines and the Water Environment. Report of the National Rivers Authority, Water Quality Series No 14 Published by NRA. vi + 46pp. ISBN 11886520 X. Cost £7.95.

This report, which has been widely quoted in the national press, surveys the legalities of abandoned mine and mineral rights ownership and relevant planning issues.

There is a brief account on the chemistry of mine water which mainly deals with the oxidation of pyrite and subsequent reactions. Coal mines as sources of polluted mine-water on abandonment are discussed at some length and case studies that relate to abandoned mines on the River Calder (S E of Burnley), the River Don (Yorkshire) and the River Pelenna (West Glamorgan) are presented. A further section addresses groundwater pollution resulting from the abandonment of metalliferous mines with case histories relating to Wheal Jane on the River Carnon, mines in the Mawddach catchment in Wales and the Devon Great Consols on the River Tamar.

There are ten coloured plates of iron-discoloured water-courses.

Paul Sowan

This review also occurs in KURG's Newsletter, No. 53, June 1997

Wet Earth Tourist Mine To Be Closed

Amid allegations that the lives of visitors have been at risk from lethal gas the Wet Earth Colliery Exploration Group have been instructed to close the 1000 metre water drainage shaft at the Clifton Country Park near Swinton, Manchester. International Mining Consultants Ltd have said that the decision to close the access to the workings follows a recent survey. Salford City Council Health and Safety officials are to launch an investigation even though they were involved in drawing up a vigorous Code of Practice with the Wet Earth Colliery Exploration Group, a group of professional engineers, before the workings were opened to the public. The Coal Authority has said that no unsafe areas had been directly pinpointed although a further survey might highlight dangerous spots. The drainage shafts were first built as part of James Brindley's water wheel complex in 1750. Brindley was the mastermind behind the Bridgewater Canal and the area is being restored as a potential tourist attraction.

Manchester Evening News

This cutting which comes from KURG's Newsletter No.53, June 1997 is sad news for many Sub. Brit. members who have happy memories of visiting it during a Study Weekend

Foord's 'Folly At Eastry

Fifteen years ago and more, long before The Folly Fellowship and The Village Lock-up Association consumed my every weekend, the younger Plum was more often than not to be found climbing a rocky outcrop somewhere in northern Europe. Like all mountaineers I had my own

reasons for participating in such a dangerous pastime, but when asked by non-climbers why I did it, often found myself unwittingly telling that hackneyed cliché "because it's there". There were moments, however, when amid a gale force wind, driving rain and thunderstorm, perched on a precarious belay point with nothing but a hastily inserted piton, close hitch knot and karabiner to save me from a fatal plunge back to base camp, that "because it's there" just didn't seem like reason enough. I hope that I can be forgiven for confessing to similar thoughts when having driven many miles in pursuit of a grotto, and after fighting my way through an assortment of brambles. All that is to be found is a pile of Portland stone fragments and a couple of conch shells.

Such thoughts recently came to mind when I was a guest of Subterranea Britannica on part of their underground weekend in Kent. I had joined them in my professional architectural capacity to help resolve a subterranean problem in Ramsgate, and was afterwards lured away from visiting Quex Park by the promise of an underground folly near Sandwich. Having quickly checked all of the usual reference sources and found no mention of it, I was hooked and duly went.

Foord's folly turned out to be located beneath the garden of an innocuous-looking house called 'Becketts' in Gore Road, Eastry, and for that matter also beneath the back gardens of most of the neighbouring properties. After lifting a wooden hatch near to the back door, a set of steep brick steps descended to a labyrinth of chalk-lined passages, bee-hive chambers and further staircases, all criss-crossing one another in a way that was designed to totally disorientate the average subterranean explorer. A no doubt well-intended sentence in the accompanying study notes advised me not to be alarmed at that disorientation as 'everyone re-emerges at the surface-eventually'! Having required earlier in the day the assistance of three fire crews simply to inspect safely the broad tunnels beneath Ramsgate town centre, the statement failed to fully reassure me or remove all of my concerns.

Once underground, I was presented with a mass of narrow tunnels and chambers, some of which seemed designed to confirm that at five foot ten, I am far too tall to be a pot-holer, and that I also need to lose an ounce or three! A few of those chamber walls were decorated with wall paintings and occasional sculpture, including a gothic traceried window. As if suggesting that the tunnels were more historic than is actually true, a huge Viking appears on one wall complete with a long sword, shield and disk breast-plates that actually made him look less like a Nordic invader, and more like Madonna with a beard. Another further painting told the tale of 'the foute murder of the two Princes at the Palace of the Kings of Kent at Eastry'. It is, of course, all a sham, although the main 'cloister' on the lowest level is said to have a mystic significance, and the myriad of nails in the walls were inserted during 'early fetes and parties'.

The precise history of the tunnels is unknown. They are believed to have been created by the Foord family who owned Becketts at the turn of the century. The Foords earned their living in the lime-burning industry, although it is not clear whether they first set out to dig the tunnels

and then used the resultant spoil to recoup their investment, or whether they dug the chalk for the production of lime and then utilised the narrow passages as an underground whimsy. Whatever is true, it is difficult with hindsight to understand their monumental effort.

While I don't want to be too pedantic about this, it is difficult for me to include the tunnels in the folly class although I appreciate that such opinions are subjective. Peter Boogaart (1) has done much to try and classify what constitutes a folly, although the final (and to my mind critical) test is whether the structure affects the heart and soul. Foord's folly does neither, but who am I to judge.

Notes by editor

(1) Honorary Secretary for the Continental Europe Region of the Folly Fellowship.

(2) Definitions rarely work outside science but I suppose you can argue that if the structure was first dug for chalk it is not a folly. I.e. it had a practical purpose. If first dug as a folly then as far as Andrew is concerned it is a failed folly. And there again some Sub. Members (me included) will argue that all underground structures affect their heart and soul.

Resolving the Bavarian Saltzbergwerk

Often quite minor events lead to particularly interesting avenues of research. In this case the chance discovery of a postcard at a flea market prompted an investigation into the provenance of the card and a trip of some 3,000 miles. The card, which probably dates from the 1950s, shows a group of people emerging from a tunnel. They are riding a narrow gauge railway on open wagons. The people are similarly dressed in crude attire and are led by a uniformed administrator. The clues to the subject matter are the caption "Ausfahrt aus dem Salzbergwerk" and "Ferdinand Berg" over the tunnel mouth. Could this be slave labour returning from a day's toil in eastern European salt mines? If so a recondite subject for a post card. The enforced smiles were no doubt intended to create an air of well-being, presumably to put at ease distant relatives concerned about the internees welfare. Following debate, the eventual view was that this was a group of patients emerging from an underground saline spa treatment centre at Saltzberg. To a spa and underground enthusiast such a conclusion was worthy of detailed field research.

Saltzberg lies beyond the far extremity of south-east Germany just over the Austrian border. The area is noted for its salt mines and these in turn lead to the proliferation of saline spas which continue to prosper in mainland Europe in spite of traditional spa treatments in the UK having declined in recent years. The most substantial spa in the immediate region is Bad Reichenhall just in Germany, and the salt museum here is where serious field research begins.

The Salzmuseum in this most attractive spa town is located in a substantial 19th century complex of buildings which once housed the salt processing industry of the area. Impressive exhibits include the massive pair of water wheels which power the saline pumps. The

museum sets out the history of the salt industry since the initial discovery of salt deposits c.1300 BP. A modern works incorporating latest technology still processes salt and this is located in the vicinity of the museum site. Bad Reichenhall however is the processing centre for brine and it is at Berchtesgaden, 20 kilometers distant, that the principal mines exist. Berchtesgaden enjoys a certain notoriety in that it was where Hitler established his summer residence. This fact presented further alternative interpretations of the post card.

Arriving at Berchtesgaden the mines can be found a short distance from the modern village centre along the side of the river valley. The scenery is dramatic and is part of the Berchtesgadener Land National Park. The mining complex is considerable and exploration revealed a complex of narrow gauge railways and tunnel entrances, which correlated with those of the postcard. The mine continues to produce salt by the controlled solution process. A bore is driven down into the salt strata. The base of the shaft is opened out by solution and by a combination of solution pumping and infilling by non-soluble rock which occurs in the strata, the solution hollow is developed upwards. Such a shaft has a life of about 30 years. Other techniques for winning salt include mechanical extraction by scouring machines and blasting. The salt, in the form of brine is then pumped to Bad Reichenhall for processing.

The complex included extensive worked out tunnels and these are open to the public at a price which equates to about £6.50 per person. Having secured a ticket the visitors are marshalled into a dressing area and there traditional salt worker trousers, smock and belt are donned. Parties are then transported to the inner reaches of the mine by narrow gauge railway. Inside the mine the visitors are subjected to a variety of experiences which include a boat trip on an extensive underground salt lake, long wooden slides to change levels and an underground funicular railway. Interpretation is through multilingual recorded commentary and each party is conducted by a uniformed guide. The mine houses an interesting collection of artifacts including early pumping equipment and other machinery. The visitor trip culminates with a fast ride on the narrow gauge railway which exits dramatically into daylight just as illustrated on the card.

Having ascertained that earlier identification of the subject matter of the card was incorrect it was necessary to look elsewhere for the spa treatment facilities. These demonstrated how the salt and health industries work in tandem to a much greater extent in Germany than in the UK. Retracing the brine pipeline to Bad Reichenhall the infrastructure of this elaborate spa is immediately apparent. In the Kuranlangen area are amassed the principal buildings of the spa cure. Surrounding these is the extensive supporting infrastructure of clinics and hotels typical of functioning German spas. Central to the cure is the Wandelhalle where the saline waters are dispensed from an elaborate drinking fountain. Close by is the Kurhaus, a nineteenth century building which would have housed the principal social activities of the spa. A modern swimming pool enables the saline waters to be used for bathing. There is also the inevitable casino. Perhaps the most

impressive building is the Gradierwerk. These occur at several German spas but that at Bad Reichenhall surpasses all others for grandiosement.

The Gradierwerk comprises a massive framework, some 100 metres in length and about 20 metres high. It is packed with brushwood to form a massive wall over which saline water is trickled. Evaporation results in a distinct saline micro climate which is beneficial for respiratory complaints and invalids often sit or loiter in the area for extensive periods to enjoy its "sea air". The evaporation also has the effect of concentrating the brine and this was once of value to the salt industry, being preferable to the coal or wood fired salt pans traditionally used in the UK for brine evaporation. The unusual feature of the Gradierwerk at Bad Reichenhall is that it is enclosed in an open frame building. This not only enhances its visual appeal but also concentrates the micro climate for the benefit of those taking the air. The structure dates from 1869 although Bad Reichenhall dates as a spa from the 18th century with much of its elaborate classical spa architecture dating from the nineteenth century

The salt industry in the area has led to the marketing of a range of speciality products. Markensalz is the corner stone to a range which includes Salzbonbons (sweets), Gurgel-und Inhalationssalz (for inhalation), Trinksalz (for drinking) and Badesalz (a range of bathing salts). The town of Bad Reichenhall inevitably contains much more of interest to the social historian. For this reason a visit should be extended over two or three days. The season is April to October and the potential visitor should not be deterred by the working spa aspect of the town. In fact this considerably enhances the town's appeal in that it provides a rich heritage that links with the salt industry.

Reference sources:

Salzmuseum and Salzbergwerk, Bad Reichenhall and Berchtesgaden, 1997.

Tourism brochures and leaflets, 1997.

Simon P. Behrens M. 1988, BadenRur Und Kurbad, Eugen

Diederichs Verlag, Munich, p.187-196.

Bruce Osborne

Report On Visit To Wieliczka Salt Mine Poland For Speleotherapy (Subterranean) Treatment 1997

The town of WIELICZKA lies 15 km from Krakow. Its salt mine, the oldest in Poland, is a tourist attraction for it contains extraordinary sculptures cut from the salt, underground lakes (created for the tourists) also a small museum an adjunct to the tourist shop. Alongside the mine, for half a century, operates the 'Kinga Spa Hospital' [Kolpania soli]. The treatment offered is unique and is conducted in defunct mine tunnels and chambers. In the 19th century, the beneficial effects of the salt chambers on human health was already known. In 1958 Professor Mieczyslaw Skulimowski started regular subterranean treatment for selected respiratory system disorders. Polish research has proven the incomparable effectiveness of

subterranean therapy in the treatment of: pollen allergy, chronic allergic inflammation of the nose, throat and bronchi, bronchial asthma

The high effectiveness of the treatment in the salt mine chambers is a result of the special microclimate, characterised by unique chemical composition, high degree of ionisation, constant temperature of 14 degrees C., high humidity and the lack of industrial pollution. A treatment period of 24 days is recommended and patients spend some 100 hours in the mine. 60% of patients improve their health.

The sanatoria

There are three sanatoria, Kinga I, II and III. They each house some 35 patients who are accommodated in single, double or three person rooms.

On arrival at the sanatorium the patient is examined by one of the four Doctors who are on a rota system. There is always a nurse or Doctor on duty at all times. Patients are monitored regularly and medication distributed at regular times. Each patient is visited by a Doctor and nurse prior to retiring for the night. No rooms or toilets are to be locked.

Meals. It seems the basic meals are cooked at a central base and distributed for heating to the three sanatoria. All meals are a set menu. Breakfast can be at 7 am when patients are going to the mine or 8 am at weekends, holidays, and if they have been sleeping in the mine overnight and return for breakfast pasta in milk, rice, groats or cornflakes to start with plus bread, butter and cheese usually, sometimes meat, cold scrambled egg with onions, tea or milky coffee. Lunch is held at 1.30 pm., soup to begin with then meat, or rissoles, once fish, together usually with mashed potato. Tea is at 5.30 pm - bread, butter and cooked meats, brawn, pate or sausage, tea, and sometimes it was a soup with bread and butter.

The Patients

Patients are sent by their local Doctors from all over Poland. In Kinga III, there were also three people from Lithuania, one paying the same as SPB and colleague. We were puzzled, but found it was privilege to sometimes receive three apples at lunch (gave 2 away each time) and another time bottled mineral water and salt sticks. We did not understand this anomaly however' after difficulty with language, the Doctor (patient) who sat on our table told us the reason was because we paid.

Only children who have just come out of hospital and unable to go to school attend mine treatment at this time of year. There were two, a boy, and a girl who came with her grandmother.

June and July are limited to children only for treatment.

Salt Mine Treatment

Once it has been established that the patient is fit enough to go below ground he or she joins the established regime in the 24 day period. Monday, Tuesday, Wednesday and Friday mornings, and Wednesday and Friday nights. Each

person is given a helmet plus a bag in which is a sheet and a duvet cover. A coach arrives at 7.30 am, or 8.30 pm for evening sessions, to collect patients from Kinga II and Kinga III, those in Kinga I walk across the road. Medical personnel from each house is present.

A certain number of mining lamps are distributed between patients (own battery torches are not allowed). Once a couple of miners have arrived to operate the mining cages for descent, patients are then counted in and squashed in, 9 or 10 to a cage, the first three cages rise up, then as the fourth one is filled they all travel down together 211 m. to the 5th level. The cages return to collect the next lot of people. Numbers were in the region of 75 during the time SPB was present. Having reached the bottom, there is some light from emergency lighting, however those with the mining lamps turn them on to ensure patients do not trip on the remaining rail lines on the tunnel floor. One of the medical staff leads everyone through heavy metal doors dividing the tunnel off into sections [fire precautions], after 400 m the well-lit sanatorium is reached. All the patients have a bed, which they prepare with the clean linen, and a bedside table. SPB expected to be able to read and had brought a book.

Patients are next directed into the 'inhalata' chamber and sit around on benches or stand behind them. The Doctor or nurse turns a switch which illuminates the cone-shaped structure which has runnels around it at different levels: another switch is turned on and salt water jets upwards, some misting into the atmosphere with other water cascading down the cone and dripping over the sides of the runners. Patients are then requested to sing, the night Doctor was particularly keen on keeping everyone singing by suggesting songs. She also kept people longer around this structure. After an allotted time the 'inhalata' is switched off. (Before everyone leaves the sanatorium at the end of each set period they also have another session around this 'inhalata'.) Patients next walk to the gymnasium (some decided against it and went to bed) where general and breathing exercises are organised by a professional [Physiotherapist probably]. No exercises take place during the night-time sleepovers.

The toilets are situated 200 m or more away - quite a route march particularly if you have to go there at 4 am in the morning and half asleep. Your helmet has to be worn too as you are walking down a tunnel [mining regulations]. The toilets are flush, kept very clean, no toilet paper [everyone carries their own] nor soap but there is running water for the washbasin. No toilets are to be locked.

With very few exceptions everyone goes to bed folded in their duvet envelope, covered by a blanket. The lights are put out even in the mornings so no reading is possible. Everyone rests or sleeps for approximately 3 hours a morning. The night Doctor always comes round to each individual on sleepover nights and literally tucks you in. Lights go out about 10 pm and you are awoken about 6.30 am.

As the temperature is cold in the mine, patients wear an enormous quantity and variety of clothing: woolly hats, two pairs of trousers, jumpers, cardigans, shell suits, jackets etc. During SPB visit it was bitterly cold outside

with quite a lot of snow, and most people wore a thick scarf under their helmet as well.

Other Observations

Most of the ceiling of the mine sanatorium was reconstituted with a grey cement like material, and the walls extensively propped by thick tree trunks in a lattice form. However, either salt had penetrated through the wood or the saturated atmosphere had laid down salt crystals on the wood, not to encase it though. SPB was surprised because in Romania the salt chambers, floor, ceiling, walls and huge supporting pillars were left uncovered. Presumably the ionisation spoken of by both countries can penetrate the atmosphere anyway. Salt bedrock samples obtained.

A man came on one morning when we were all ostensibly asleep, he moved around from area to area with a machine sounding like a 'hoover', screwing and unscrewing glass rings. Apparently he was checking for any bacteria. A young couple on three mornings walked around back and forth, area to area, and repeating the readings they were taking with a black wand attached to an electronic machine. The young man spoke a little English, they were checking the temperature and humidity.

There appears to be no liaison by Poland with other Eastern European speleotherapy centres. The Doctor I spoke to in my limited French had no knowledge of the three centres in Romania but did know of one in the Montagne Tatra mountains, Demanowska Jaskinia, Slovakia.

Difficulties:

Language. SPB suggests that information cards could be produced with phrases in several languages on them so that those coming from elsewhere could have some chance of understanding some instructions.

Sylvia P. Beamon

Notes by editor

1. This article falls within Sub. Brit's sphere of interest because it is a use of underground space. From the purely scientific point of view there is much extra some members would like to know.

14 deg. C. does not seem a particularly low temperature. A figure is not given for the humidity but it cannot be very high since it would otherwise be impossible to live in the system because many things would be running with water. In mines of high humidity linen will rot in a few weeks. Furthermore the presence of salt crystals on the wooden props perhaps indicates that salt in solution rises up the wooden props by capillary attraction and then crystallises on the surface of the props by evaporation.

Mountains are said to be healthy places to live because of the presence of electrically charged water droplets associated with steep streams. The energy generated by water tumbling over rocks at high velocity causes ionisa-

tion (tempory dissociation of the water and perhaps other molecules into electrically charged constituents) and some of the ions are incorporated into water droplets produced by the disintegration of the falling water mass. Squirting water at high velocity from jets produces the same effect which seems to account for the apparatus in the inhalata which paradoxically means we are talking about mountain air therapy as well as speleotherapy.

The editor would like information and discussion on these technical points because they are relevant to investigations on sand mines at Reigate. Come on you scientists!

Sylvia also mentions the ceiling of the sanatorium as covered with a grey cement-like material. It is not unusual to spray cement (shotcrete) on underground surfaces to prevent spalling (a gradual deterioration by bits peeling off). Spraying on a rock salt surface sounds something different.

2. From the medical point of view, the article is a personal view by Sylvia and it should not be assumed that Sub. Brit. is promoting speleotherapy or any other therapy as an effective medical treatment.

Guildford and Reigate Caves As Described in Two Old Books

It is sometimes said that the Victorians invented history. They certainly loved their romantic novels and tales of Merrie England. Among the popular, now virtually unreadable, novellists of the time was Martin Tupper. In 1858 he wrote, *Stephan Langton, or, The Days of King John. A Romance of The Silent Pool.*

The setting of this book is Albury near Guildford in Surrey about the beginning of the twelfth century. Its about evil King John burning Stephan's girl friend to death for a lark (she turns up alive later) and John causing the death of Stephan's best mate's daughter by drowning her in the Silent Pool (The Silent Pool is nowadays a well-visited beauty spot) during an attempted rape. After a whole series of adventures in which Robin Hood is naturally involved Stephan becomes Archbishop of England.

From our point of view caverns in Guildford and more importantly Reigate are described:

'Gilford Castle is now reduced to little more than the shell of its Keep: a plain square tower, some seventy feet in height, with walls three yards thick; roofless, grey and crumbling; built of chalk ragstone and flints varied by Roman herring-bone masonry; some of the chalk lumps in the recesses being carved with rude figures of a king and a bishop, a saint and the crucifixion, possibly the work of some ancient prisoner, possibly also of some more modern' puzzler of pundits and archaeologists. For all else, as we have it now, there is extant little but a ruined porch or two, certain arched and vaulted crypts under houses in the town. some fragments of walls above ground, and much more extended foundations beneath.

But in the day of which I write Gilford Castle was

a vast and populous place of strength and habitation, running far over what is now the chief county town of Surrey, and comprising within its wide enclosure of mounds and bastions a labyrinth of single-storied wooden dwellings, guard-rooms and kitchens and dormitories by scores, and in chief the principal hall of audience, lofty and insulated. surrounded by its courtyards, and with a plentiful sprinkling of cabins, honeycombed against the inner walls. Furthermore for escape to beleaguered friends within, or surprise to besiegers without, there were (and are still, though walled up by our magistracy as perilous) several subterranean gangways cut in the chalk hills whereon the Castle stands, leading to five vast cavernous excavations; one of them fifty feet by twenty and ten high, another a hundred and twenty feet long thirty broad-and so on: the passages leading thence by several ways into the open country. '

"Well: Hal, as I said, was journeying through Reigate, and thought there must be a market there for the throng: so he asked a country wife what it might mean. " Save thee, Sir, -to-day my Lord has all his friends about him in the Castle, and they do say, -but o' which part be thou, for king or people ? "

" If the king were a king, for both, but, if he be a tyrant, a murderer and a robber-"

" Enough said, and God be with thee, Sir: go in there under the round portal and say 'Fitz-Walter' if the porter stops thee."

Hal saw it all at a glance: and thanked Heaven for good guidance. He went under the round portal, whispered the password, and followed through the first court; thence through the inner ceinture to the second court; in the middle whereof, square and solid, stood the Castle-keep. There, with a string of other folks as all along, habited like himself as travellers and in disguise, and (albeit many of them magnates) with no baronial pomp and circumstance, he entered a low-browed arch, and by a sliding door at side out of the gallery immediately found himself in a small chamber. The middle of its floor was open; an irregular-shaped trap-door having been lifted off, and leaned against the wall; and a smoky light streamed up from the opening.

Following on in his turn, Hal spoke to an official, stationed to examine each as he entered: it would have been certain and sudden death to any spy or John's-man who might dare to come so far. But Hal had proofs of loyalty to the People's cause positive and most welcome; to wit, his wallet full of letters from Stephan Langton. So, gratefully and gladly was he bade to go down.

First, some twenty steps cut in the sand-rock, then for 200 feet a narrow sloping gallery, till the plumb-depth might be 50 feet, perpendicular from the surface, led to a large excavation 125 feet long, 14 wide and 12 high; it was rudely shaped in to the semblance of an arched roof, and at one side had a similar offset cavern 50 feet long, with stone seats ranged laterally and at the end. The gallery and caverns were set thick with torches which blazed and

smoked prodigiously: quite a dense cloud hung along the crown of the roof...The heat was too suffocating and they soon broke off for want of very air."

If you visit the Barons' Cave today you will find no castle but there is a pyramidal stone structure with an entrance gate at the place where the trap-door might once have been. However if you follow your nose downwards you will eventually come to a lower entrance which exits into the dry moat of the former castle. Tupper's description of the cave matches the present day description. The dimensions are almost the same, the number of steps are as Tupper says and it has been proven that it is not possible to survive in the cave long with burning torches. However Tupper does not mention a lower entrance.

In his preface Tupper says: '...It (the book) may be depended upon for archaeological accuracy in every detail.' If we accept this, the question is where did Tupper get his information? The answer may lie in a further statement in the preface: "There may be some interest to the reader in the mention that the above accurate details of small facts concerning the composition of my 'Stephan Langton' are extracted from one of my literary manuscript Archive Books, now numbering twenty volumes (folio or large quarto) and full of all the newspaper cuttings and magazine reviews, notices and illusions which I could readily obtain from time to time as they appeared."

Does anyone know if these manuscripts still exist?

The second book extract comes from Picturesque England in Lay and Legend, Song and Story. Published by Frederick Warne & Co. The book in your editor's possession was won as a prize (presented by H.H. Princess Victoria of Schleswig-Holstein) in 1910 otherwise there is no clue to the publication date

In the centre of the lawn is a small pyramid of stones, having an opening in it which is the entrance to the singular and interesting caves below. A flight of stone rough steps, eighteen feet deep, and a descending passage of twenty-six feet or more, lead to a small cave which has the appearance of being a guard-room, at the bottom of this entrance, but no one is now allowed to descend the steps to it. To see the caves we had to call on the gardener, who has a pretty cottage near a stone archway (erected 1777), and ask him to conduct us to the caves, Walking down towards the ancient moat and half round the mount, we descended some steps, the guide opened a door, and we entered the caves. Candles in holders are placed along the walls, and these the guide lighted as we proceeded, and we saw by their dim light the interior of the caves. From the small chamber at the entrance we passed into a passage rather more than a yard wide, and eight feet high, which widened to double the size as we advanced.

Our feet were on pure dry silver sand that carpets all the cave, and glitters delightfully. It is never damp there, the guide told us. On the white sandstone of the sides of the passage are a great number of wonderful carvings. Several heads are Roman in feature, and wear the Roman casque, and in one or two places we recognised the white horse of the Saxons. Had time and light allowed, one might have deciphered something like a story inscribed on these stones.

The cave passage runs on till another joins it, that is about twenty-seven feet long, and opens into a cave called the Barons' Cave. It is rounded into the segment of a circle, and at the end is a stone seat, on which tradition says the Barons sat when, in the security of this earth chamber, they deliberated on the demands to be made in Magna Charta. It was interesting to believe that we looked on the spot where the charter of our freedom was concocted; but unfortunately there is no proof of the truth of the tradition.

On the ground lay an immense stone cannon ball, that the guide told us was used to summon the soldiers from the guard-room. He lifted it and let it drop, and the sound reverberated through the caverns. The cave-passages lead direct to the guard-room, a good-sized cave, from which the passage and steps ascend to the garden; a very few men could have protected the Barons from foes descending them, or entering by the doorway; and the cave is certainly well fitted as a meeting place for conspirators. The Barons' Cave is thirteen feet wide.

There are other caves in Reigate, some of which were discovered when the railway was made. One of them under the railway is used as a wine vault. It is of some extent, and has rather dangerous pits in it. We saw it, by courteous permission of the owner, lighted by a guide with a tallow candle on a rod which faintly illuminated the surrounding darkness. A little boy of the party ran away, and the guide was evidently uneasy till he came back again, as we could not have found him if he had hidden in the great dark caves, or he might have fallen into a sandpit.

Were these caves (said to extend for eight miles) refuges for the Surrey women and children when the Danes invaded England? For the inhabitants of this district were so successful in repelling them (the Danes), that they gave rise to a proverbial distich attributed to them by Camden,-

“ The vale of Holmes dale
Never wonne; never shall.”

The reason that doubt has been cast on the story of Magna Charta having been concocted in the Barons' Cave, is that the Earl of Surrey of that time continued faithful to the king till cannot, therefore," says Timbs, "be supposed that his castle would be chosen for their deliberations." It is quite possible, however, that Lord Surrey and his friends may have held secret consultations in the Barons' Cave.

This second book extract tells us that there is now a second lower entrance to the cave and that the top one is not used by the guides. This is what the Wealden Cave and Mine Society (WCMS) still do today since the top entrance is cramped and low and visitors can possibly fall down the steps. Guides of WCMS still drop the stone canon ball which seems to have survived in the cave to this day - but it is hardly immense! However it cannot be said nowadays that dry silver sand carpets the cave and glitters delightfully. Quite the contrary for the sand is well trodden and very dirty. Perhaps this is evidence that the bottom entrance has just been constructed and that the fresh silver sand was the spoil from the digging?

The reference to other caves in Reigate poses a mystery because although there are numerous other cave (actually sand mines) sites in the town the ones here described cannot be matched to ones we know about today

Monty's Hideout - Something else in Reigate

High up Reigate Hill in the chalk, is a series of lined tunnels dug during WWII. They resemble the WWII tunnels at South Heighton discussed in previous newsletters and about which Geoff. Ellis gave a talk at one of our conferences. Also there is a simillar installation at Broadwater Down near Tunbridge Wells.

Almost nothing is known to Sub. Brit. about the Reigate site but your editor has just come across someone who worked there during the war. She said that she was in the Royal Signals regiment of the ATS from about the end of 1942. The Reigate installation came under South Eastern Command. She worked a teleprinter but since everthing was in cipher she did not know the purpose of her work but everyone was told that they were helping to save on motorcycle dispatch riders. This story was supported by the fact that there was an adjacent dispatch riders camp. Later in the war everyone did come to realise that they were involved in the run up to D-Day (June 6th 1944).

She enjoyed working there (despite rats) but she did not live on the site but was billeted close by.

She recalls the site was covered with camouflage netting.

After D-Day she ws moved to the signals office (London District) in Curzon Street London and ws billeted in The Dorchester Hotel. Oh, what a lovely war!

With regard to the local name 'Monty's Hideout' supposedly connecting the site to General Montgomery she does not remember him or any other VIP being at the site.

With these leads perhaps some keen Sub. Brit. member can unearth more information about the subject

Parson Darby's Cave

Just beyond the high-browed headland of Beachy Head, on the next eminence of cliff, marked by the old now disused Belle Tote Lighthouse, there is a cave going far and deviously into the bosom of chalk, known far and around in the district as ' Parson Darby's Cave ', or, more shortly, ' Darby's Hole '.

While much of folk-memory seems frail and evanescent, there are some things-things which make an appeal to the imagination and to the deeper instincts of the heart-which linger on in the traditions of country life, and so it is, attached to ' Darby's Hole ', there is a story carefully cherished of two hundred years ago.

Jonathan Darby came to be vicar of East Dean in 1706, the early years of Queen Anne's reign. He was from Queen's College, Oxford, and of Sussex breed, for his father, Ephraim Darby, had long been vicar of Ashurst. The writer likes to picture him as a man, strong, big of bulk, riding his cob to visit his wide-scattered flock, for he

was vicar, not only of East Dean, but, as he informs us in the old parish register, ' by permission of the Lord Bishop Dr. Williams and the patrons, the Dean and Chapter ', also of Friston and farther away, reaching to the Cuckmere Valley, off Litlington.

In those day there were no lighthouses or special protection for sailors-certainly not on this part of the coast; and wrecks with loss of life were of frequent occurrence. Just outside, from Birling Gap to Eastbourne, there is a shelf of hard rock with saw-like projections rising above low water, which tears away the hull of any vessel which has been driven by storm or drifted in the fog too near the cliff. To this day it is one of the well-known danger spots of the Channel.

The old vicar's heart was touched by this constant loss of life on the sea-edge of his parish; the number of mounds of unknown burials in East Dean churchyard was growing each winter, and so it was he did a work which must have cost him a vast amount of time and labour, but which has ever since been connected with his name.

Under the Belle Tote cliffs, where the rocks with their saw-like teeth stretch far outward to sea, utilizing a deep fissure in the chalk, with chisel and axe he hewed out a wide chamber with side recesses for shelter from the wind, and he connected this-for his cave was some twenty feet up, out of reach of the sea at high water-with the beach by a sloping tunnel and by a stair of steps.

And now, when the Channel was running with winter gale, the Rev. Jonathan spent night after night in his cave. Outside hung a great lamp to guide sailors who might be struggling below in the sea, and within, in the little side recess we have mentioned, he could take rest and shelter, aided by ropes and other assistance.

Not once or twice this brave parson saved the crews of ships broken on the rocks beneath; on one occasion a brig with twenty-three hands came to pieces under the cliff, and as it was high water and no landing-place available for a mile or more east and west, assuredly every soul would have been lost but for the devoted assistance of the old vicar.

Unfortunately, much of Parson Darby's cave has been destroyed by some recent severe storms. Years ago it was quite easy to climb into the cave through the vertical tunnel, commonly called the ' chimney ', by means of a rope which dangled down, but now the entrance of the cave is quite washed away, and only by the help of a ladder can the visitor get within.

There are still, as fresh as when first made, the chisel and axe marks visible on the walls. Farther on a passage leads away into the bowels of the cliff. It was a spot, so tradition says, known and used long before Parson Darby's time by the smuggling fraternity, and had associations of loot and adventure. The cave is more easily reached from the Birling Gap side. From there it is about one mile eastward and immediately under the old Belle Tote Lighthouse.

Parson Darby is one of those few men who have left a clear tradition in parish thought; the memory still lingers of the sturdy old man in knee-breeches and heavy beaver

hat, riding on rounds of visits to his people. There is one cottager who possesses, and indubitably, his clock, a brass-faced grandfather, as handsome a piece of furniture as one could find.

Nearly a hundred years ago a foolish jesting journalist, writing of Parson Darby, started the tale that he was driven to seek the shelter of a cave by reason of a vinegary and violent-tongued wife, and that she was a sour Xantippe which made home the least pleasant place in the world for him. There is not a shred of evidence for this tale, started then and repeated by writers who wish to be jocular ever since.

On the contrary, there is from a reference in his handwriting, in the ancient parish registers, what suggests something quite different. When Anne, his wife, was carried out, 'his home was left unto him desolate', and not long after, a space only of a few months, Jonathan followed her.

These lines are written in old Darby's study, a dark-panelled room, though cheerful and cosy enough, and with deep-set windows, and day by day one passes, on the way to church, the large lichen-covered slab which covers this big-hearted vicar of two hundred years ago, 'vir dignus perpetuo honore,' and 'my beloved Anne, my wife.'

From, *On Foot in Sussex, A loiterer's Handbook*. A.A. Evans. Methuen 1933.

The Second International Congress on Subterraneology - Mons, August 1997

Some ten years ago a number of members of Subterranea Britannica attended the First Conference in this series, at Reves, a small village to the north of Charleroi in Belgium. This summer Sylvia Beamon and Paul Sowan attended the second 'underground' conference, based near the city of Mons in Belgium.

There were also old friends from, apart from Belgium: itself, the Netherlands, France, Germany, Bosnia, and Croatia. And new contacts from Georgia (former USSR, not USA!)

Mons is a splendid city with excellent railways and road connections in all directions. It also boasts within its boundaries the famous Neolithic flint mines at Spiennes, which we visited (this being the 'Belgian' version of Grimes Graves and Rijkholt.) Also within the city boundaries, at Cuesmes, we visited extensive mines, which had been worked c. 1870 - 1920, for phosphatic chalk for agricultural fertiliser manufacture. The third underground visit (there was one on each of the three days of the Conference) was to the fortification tunnels at Philippeville, some distance to the east of Mons. We also visited a derelict and overgrown mill site at St. Denis (called, but not, an Abbey!) This had some fascinating cellars which notices in French suggested should not be entered ... this did not prevent a multinational breakaway group from exploring, while the main party went on to see the ice house. Lunches were good at what the Conference litera-

ture described as 'democratic prices', held at the university premises outside Mons where the lectures and stalls were based. An equally democratically priced cheese and wine party at the very curious castle at Havre (it looks like a factory, but is not!) was very pleasant, although both this and the St. Denis visit would have been less successful had the weather been less kind! It was warm and sunny all three days.

Informal contacts, the displays and bookstalls, and the illustrated lectures all provided ideas for further visits, especially in Belgium and northern France. Quarries and sand mines below Laon, and chalk quarries below Lezennes (a suburb of Lille) particularly caught the writer's attention.

Lectures included Silvia Beamon's thought provoking contribution on sound underground, and it was interesting to hear in discussion afterwards that in France, according to our Parisian informant, it is not considered to be unlucky to whistle underground. Other lectures were on water supply tunnels in Italy, the mines and quarries at Laon, military shelters in Croatia, iron mines in France, sacred caves in Bosnia, and many others. Sadly, the programme was too crowded for us to hear Guy de Block's contributions on historic underground Brussels.

As this was a very accessible, and very affordable weekend, it was sad to see the UK so under-represented.

Book Review Underground quarries in Egypt

Paul W. Sowan

Rosemarie & Dietrich D. Klemm, 1993, *Steine und Steinbrüche im Alten Ägypten*, Springer-Verlag ISBN 3 540 54685 5 xv + 415 pp incl. 16 pp. coloured plates. 86 pounds Sterling

This volume addresses the geological and archaeological aspects of Egyptian building-stones and building-stone quarries in antiquity. Many underground, as well as opencast, quarries exist in the Nile valley. The book contains numerous photographs showing open quarries and underground quarry entrances. The location maps, whilst adequate, are of disappointing quality.

The rock-types exploited include limestones, calcareous sandstones, sandstones, marbles, cemented breccias, greywackes, and a range of fine to coarse-grained igneous rocks of all compositions from basic to acidic, especially granites, syenites and granodiorites, as well as some metamorphic rocks such as gneisses and amphibolites. The geological ages of these rocks are either pre-Cambrian, or Cretaceous or younger. There are sixteen pages of colour plates of the rock types, and much petrographical detail. Detailed plans of opencast or underground quarries are not presented, although the underground galleries appear to be numerous but relatively modest in extent. The subterranean workings are mainly for limestone, gypsum, alabaster, and some sandstone. There is considerable detail, well illustrated, on graffiti and on toolmarks within the quarries, and unfinished part-worked stones which throw considerable light on the extraction methods used.

Paul W. Sowan

Safety Underground

It is a object of Sub. Brit. to promote the safe exploration of man-made underground structures. Most underground places visited by members will be well-known and they will be in the hands of expert guides and the hazards (if any) well controlled. Also most structures visited will be small. On the other hand members are sometimes lucky to be asked to investigate newly-come-to-light structures and additionally some members spend their time in very extensive mine systems. The latter two cases are perceived as the most dangerous and are therefore given most thought from the point of view of safety. The perverse result is that accidents, how ever small, are more likely to occur in the former two cases.

There is no full set of rules to cover safety underground. The following is a set of guidelines based on a talk give by Stuart Goldsmith at a Day-Conference but the, underground explorer must be ever vigilant. Sub. Brit. members are reminded that underground they should think of their own and other people's safety. Failure to observe obvious safety precautions sets a bad example and is a selfish act at the very least.

If this sounds alarming remember all ways in which the human race enjoys itself carries risk. E.g. Eating, drinking, sex, sunbathing, lack of exercise etc. Safety comes from knowledge and sensible action.

On Sub. Brit. Study Weekends it is observable that some members are very elaborately equipped to the point that some may think, erroneously, that this is overkill. These members are active members of caving clubs. Sub. Brit. is not a caving club but many of its members are. Caving clubs are very safety conscious. The procedures of good caving practice apply to the exploration of man-made structures but there are possible additional hazards.

The following guidelines are developed as the result of incidents which have actually occurred in the past although most are thankfully not connected with Sub. Brit. members. They are also relevant to above-ground military industrial and other sites. Be aware that the approaches to and away from sites also have hazards.

The editor would like readers' comments. It is our aim to issue approved guidelines to new members.

The Guidelines

(Remember they are not a complete set of rules to guarantee your safety.)

1. Always get permission to visit sites
2. Think about likely hazards at the site
3. Find out and assemble the

appropriate equipment for each trip. This includes first aid kit and obtaining the key to get in if necessary.

It will always include a hard hat and lamps.

4. If the site is protected with a locked door ; will you lock yourself in after opening the door? If you don't lock yourself in strangers might get in without your knowledge. If you do lock yourself in have you thought about the consequences of loosing the keys while you are locked in? Make appropriate decisions.
5. Think about how you are going to get out? Suppose the entrance you came in collapsed? Suppose there was a fire?
6. Do not go if you doubt your physical or mental fitness.
7. Check that you are wearing suitable clothes
8. Carry more than one source of light
9. Tell someone where you are going.
10. Do not go alone.
11. Tell someone at home what time you expect to return
12. Appoint a group leader.
13. The leader must go in first
14. Speak up if you see the leader or anyone else do something unsafe.
15. Do not lark about or play jokes underground. Believe it or not this has occurred and accidents have happened

Some Possible Hazards

Collapsing roofs and ceilings.

Collapsing floors.

Old corroded fixed ladders.

Holes and shafts in floor.

Objects to trip over,

Electricity. It is possible to come across live cables underground.

Floods - it is possible to walk into deep clear water without noticing that it is there.

Gases - Gases can be poisonous suffocating or inflammable They can arise from decomposing vegetation, left over debris, leaking gas mains or as in the case of radon from radioactive rocks.

Chemicals: Industrial chemicals or solvents may have been dumped underground or in ex-military sites substances like mustard gas are a possibility. **GET OFF THE SITE AND REPORT WHAT YOU HAVE FOUND**

Leaders should

Know exactly who is in their party at all times.

Have a clear idea of what they are doing and explain it at the beginning of the trip.

Know the capabilities of the members of their party.

Never rush their party.

Know and understand what equipment is being taken

on the trip.

Check equipment is being properly used on that trip. (This is especially true in the case of ladders and life-lines.)

Put the well-being of others as a paramount consideration.

Equipment

Sub. Brit. is not a society to promote adventure sport.

Equipment should be as such as to make the trip as easy and safe as possible.

Never use SRT (single rope technique).

Use builders ladders in preference to cavers ladders

Use a safety line if using cavers ladders.

Consider using safety lines on other occasions.

The provenance and history of all equipment must be known and a safety assessment made

Health and personal hygiene

Get a anti-tetanus injection.

In places where rats may go Weils disease is a possibility. Take precautions.

Always wear water-proof gloves.

Do not eat drink or smoke underground.

Wash hands after leaving site.

There is a journal called NATM (The New Amalgamated Tunnelling and Construction Magazine.) It is a pity that Sub. Brit. cannot subscribe to professional magazines like this but merely hope that occasional copies come its way.

Issue No.26, March/April 1997 includes an article by George Slade, Managing Director of Galliford Tunneline Ltd, recalls changes in tunnelling techniques, largely or sewer construction, over fifty years. A family business is described going back to his great grandfather who was an apprentice working on the Seven Railway Tunnel (1873-1886). By 1958 there were eighteen family members working on a major brick lined sewer building programme in Hull. Tunnelling was a trade offering a job for life and good teams of miners and bricklayers stuck together. Years of experience in coping with different ground conditions counted.

In the 1950's the resident site engineer would normally be male, be at least fifty years old, have worked in the industry all his life and would come to work on a bike. The method of tunnelling in was not too different to the Victorian era and was very effective. The author calculates to build a 1km tunnel the older method of constructing a brick-lined tunnel could be faster than a modern concrete structure using a tunnelling machine. This is in part due to the costs of assembling the machine underground and later dismantling it and removing it from the site.

A problem with the older brick tunnels which is causing us to inherit problems today is that it was not easy to fill the void between the brickwork and the ground. Present day problems in sewers have resulted from this. These days, however, there are effective back-grouting techniques.

A Tale of Three Railway Tunnels

Britain abounds with abandoned railway tunnels but there are few imaginative ideas of what to do with them. During the last year three cases of attempts to revive such tunnels for public benefit have come into the news.

The first case was that of Combe Down tunnel in Bath which was mentioned in Newsletter 18. Sadly an attempt to acquire lottery funding, for the purpose of incorporating it into a walkway and traffic free cycleway connecting the centre of Bath with the countryside, failed. (Information from Brian Clarke)

The second case at Heathfield in Sussex was one of success and a paper issued to visitors on the Civic Trust Open Day 1997 is reproduced below. (Information from Ron Martin.)

The third case is from Ramsgate. The Council asked Sub. Brit. for ideas. On the Study Weekend 1997 members were allowed in the railway tunnel and the associated WWII air raid shelters and, based on individual ideas, a report which is reproduced below was prepared.

'Welcome to Heathfield Tunnel Open Day. This impressive piece of Victorian engineering is officially open today for the first time since 1965 allowing the public to view the initial phase of works together with plans for future phases.

The tunnel once formed part of the Polegate to Eridge railway (named the Cuckoo Line after the tradition that the first cuckoo of Spring was heard at Heathfield Fair). Contractor Joseph Firbank & Sons built the line on behalf of the London Brighton and South Coast Railway.

Construction of the tunnel commenced in July 1878 by driving two shafts down from the hill above. From the bottom of these shafts gangs dug towards both the centre and the entrances of the tunnel. Perhaps you can imagine conditions at the bottom of such a shaft: constant waterlogging; no through flow of air; candlelight and oil lamps the only means of illumination. In June 1879 the gangs met in the centre; the south entrance was reached a month later and the north entrance in October 1879. Completion of the entrances took until January 1880. In an early example of recycling the clay dug from the tunnel was fired and made into bricks locally and then used to line the structure. Some 1.5 million bricks were made and laid. The excavated sandstone was used to form pillar caps and keystones weighing up to 3.5 tons. This mix of clay and sandstone rock together with an active spring means that water stained with mineral salts has always leaked (and will continue to do so) through the roof and walls of the tunnel, staining the walls in a variety of colours as you will see. In a hard winter coloured icicles are formed.

The line opened in 1880 and continued in use until 1965. Although single track, a second line of rails was laid as a siding inside the full length of the tunnel. This siding was especially useful during World War 2 when ammunition trains could be safely stored under cover of the tunnel without blocking the line.

In 1896 a 370 feet (113 metre) deep well was sunk to provide water for the steam locomotives. The well passed through a natural gas field and this fortunate find was used to provide gas lighting for the station with a miniature gas works being set up. Companies with the grand names of Natural Gas Fields of England Ltd and East Sussex Gas Light Coke and water Co rushed to exploit the supply. This supply, however, never proved large and since the gas was 95% pure methane, the majority was used for research into mine safety and the companies' dreams never materialised. The supply dwindled and the borehole was capped in 1963. Nothing now remains of it.

The railway closed north of Heathfield in 1965 with a goods only service south of Heathfield continuing until 1968. The railway was demolished by British Railways and the track and drainage system torn up. The area remained derelict until 1979 when it was purchased by Wealden District Council, following which the station area was developed as an industrial estate.

The tunnel, now some 116 years old, continued to deteriorate, whilst various ideas for its re-use were discussed. In March 1996 an investigation showed that whilst basically sound, the brickwork was crumbling in places whilst the flooding of the foundations since 1965 was giving cause for concern. The present phase of work began in March 1997 to restore the tunnel by providing drainage, repairing brickwork (especially at the entrances) and lighting the tunnel. It is in this state that you view it today. ‘

This phase of work should be complete by October of this year. A second phase will provide gates to the tunnel, further brickwork repairs and landscaping of the southern end. Heathfield & Waldron Parish Council, who own the land north of the tunnel, plan to provide a country park in that area to celebrate the millenium. Plans of this project are on show today. Once all these works are complete the tunnel will be open, linking the two park areas during daylight hours.

For further information on the tunnel contact Graham Kean, District Council, Pine Grove, Crowborough, East Sussex (01892 602461)

Ramsgate

Notes on proposed usage of tunnels as tourist facility

Purpose of report:

Ramsgate has a disused railway tunnel which formerly opened onto the sea front. From one side of this a long narrow tunnel, dug in chalk, loops around the town. This was constructed as an air raid shelter for the town's residents during WWII. Since that time both this and the railway tunnel have been abandoned. In 1996 Thanet District Council approached some members of Subterranea Britannica (a voluntary non-profit making organisation) with the view to eliciting opinions on adapting the combined tunnel system (the Ramsgate Tunnels) for tourist purposes. Later Malcolm Tadd, Honorary Secretary of Subterranea Britannica, suggested that as part of the society's field study weekend in east Kent during August 1997 that the Ramsgate Tunnels be opened to the society. About 50 members of Subterranea Britannica thus explored the system and this report is based on their reactions.

Relevance of Subterranean Britannica:

Subterranea Britannica is a national organisation devoted to the study of mainly abandoned man-made and man-used underground structures. Studies of abandoned railway tunnels and air raid shelters are part of its activities.

The society is also interested in former defence structures to the extent that it has a sub-group devoted to the archaeology of the Cold War.

Members of Subterranea Britannica are involved in

various tourist initiatives.

One of the society's members was concerned with the operation of the Ramsgate air raid shelters during WWII. Also other people involved with the Ramsgate shelters during WWII have been listened to.

Assumed concerns and interests of Thanet District Council

The Ramsgate Tunnels emerge at what is, from the tourist point of view, a key site on Ramsgate's sea front. Although apparently secure, the tunnels are subjected to much vandalism and constitute a potential safety hazard to curious children. By making these tunnels into a tourist attraction, revenue could be raised to maintain them and most importantly Ramsgate would acquire an additional pleasant and interesting feature which in turn would bring various benefits to the town.

Historic importance of the tunnels:

The railway tunnel is not of historic significance. The air raid shelter tunnels are unique. They are not protected by English Heritage. It would not be difficult to argue for their statutory protection. The shelter tunnels were devised with foresight by the local Council just before WWII for the protection of the town's inhabitants.

The plan for the tunnels

There are various problems associated with converting the tunnels into a commercially viable tourist attraction. There seems to be only one good solution but there are complex details associated with this one solution.

The main problem is that the railway tunnel and air raid shelter tunnel constitute a poor combination. They are two separate structures. The railway tunnel was also used as an air raid shelter during WWII but, as far as present day visitors are concerned, it is impossible to relate it to the air raid shelter tunnel in a convincing manner.

For the tourist initiative emphasis should be on considering the role of the railway tunnel first. This is where the main tourist interest will lie. This is where the revenue money will be made. The railway tunnel is the key to the tourist project.

As regards the railway tunnel, despite the familiarity of members of Subterranea Britannica with underground places their views were little different from what might be expected from any ad hoc group of people and were very varied, and it can be concluded that the railway tunnel, as such, has no obvious good tourist use. Two people however suggested an excellent idea - the land in the cutting at the landward end of the railway tunnel should be developed as an unusual garden. Some form of railway or transportation system (it was generally agreed that the tunnel was too long for an interesting walk) should conduct visitors from the sea front along a dimly lit tunnel to a bright secret or enchanted garden.

Although (to provide contrast to the garden) the tunnel should be dark, this does not rule out subtly illuminated tableaux along the way. It seems more appropriate that

these tell something about the history of Ramsgate as a seaside town.

With the Ride To The Secret Gardens being the principle feature and money-spinner the air raid shelter tunnels can be developed in a manner appropriate to their history. Britain does not seem to have a museum to represent life in air raid shelters during WWII although former air raid shelters are being developed for this purpose at Stockport and proposals for Reigate part cover this.

At Reigate the proposal is to give visitors an experience of exploring the sandstone caverns on an approximate 90 minute tour. Although virtually all the Reigate caverns were adapted for air raid shelter purposes during WWII only a very small section would be restored as a WWII shelter. The reason for this is that a totally restored air raid shelter would be very uninteresting and possibly depressing. Fairly extensive experience at Reigate has also shown that it is mainly elderly people recalling their wartime life who are interested in air raid shelters. Air raid shelters as such are not a good tourist proposition.

It is fairly self-evident that visitors should be able to walk the length of the Ramsgate air raid tunnel from the railway tunnel to the former Cannon Street entrance to the shelters. The problem is that it is a lengthy walk and at the present time rather featureless. Also the tunnel is narrow which means that if, for example, the wartime benches were restored the tunnels would be very obstructed.

The total outline proposals are:

1. That the disused railway cutting at the landward end of the railway tunnel be developed as a 'secret enchanted' garden.
2. That some sort of railway (old fashioned or using futuristic technology) be constructed along the dimly lit tunnel to connect the sea front with the garden.
3. That tableaux in low light, which illustrate the history of Ramsgate as a seaside town, should be erected along the length of the railway tunnel.
4. That a very short section of the air raid shelter tunnel be fitted with: benches, dummy people, audio and lighting effects etc., to demonstrate wartime shelter life. In order to overcome the problem that this could cause an unsafe obstruction and impede visitors it might be necessary to dig a new demonstration area.
5. That the areas where the air raid shelter tunnel widens should be equipped with advanced audio visual and interactive computer facilities to recreate the experience of a south coast town in wartime.
6. That a gallery of wartime art and photographs be created along the narrow air raid shelter passages. (It is possible to overcome the damaging effects of the high humidity on the art works.) It is proposed that the art gallery be developed as a national resource over the years as a celebration of ordinary people caught up in war.
7. That from the town exit (Cannon Street) a system of special buses, town trail etc. should be devised to bring visitors back to their starting point on the sea front.
8. As well as professional organisations, local societies should be invited to become involved in the project and use made of local wartime memories.

Reigate Blown Up - well nearly

This letter was found at the Holmesdale Natural History Club's Museum at Reigate. It is dated 9.6.1933 and written by Mr. Makovski a well respected citizen and long established electrical contractor. (Tamplin and Makovski Ltd). It refers to a plan of the Reigate Caves unfortunately not with the letter.

Note this is not April 1st! It is a genuine letter - honestly!

Dear Spranger, (Castle Keep, Reigate)

The enclosed plan may be interesting and the following notes may amuse you if it is at all possible for you to be amused with any of the Reigate citizens with whom you come in contact, who I fear must be more of a nuisance than an amusement!

The plan is a tracing of the Tunnel Caves and was made during the War when they were used as Munition Stores. It was made as a result of a bet between myself and the then Superintendent of the Stores as to the length of the passage which was being driven from the Constitutional Club Cave to the Main Cave, as he was continually saying that I must be ready to put in the Electrical work at once and I maintained that he had at least three weeks tunnelling to do.

I had no theodolite and could therefore only make the plan by means of measurements but it must be fairly accurate as at the point "Z" measurements had to be taken from either end and these measurements practically coincided.

It is interesting to note as a minor side light on how the War was conducted and how even during those times of stress the War Office still tied itself up in red tape, that when we were commissioned to put electricity into the Caves, the War Office Standard Specification was sent us, and I pointed out that it was absolutely unsuitable for the work in hand and could not possibly be fixed: as the Caves contained nothing but T.T. it was important that the electrical work should be beyond suspicion: eventually I drew up a Specification and the work proceeded under my Specification.

As the War progressed a Reigate resident who shall be nameless, asked the War Office whether they were aware that in the event of anything happening in the Caves, nothing would be left of Reigate. The War Office replied very tersely that they were quite aware of this but that this state of affairs could be pointed out as obtaining in most Munition Dumps of this size and Reigate might consider itself lucky in that their end would be short and sweet! However, with due solemnity an enquiry was held and I was ordered to () carpet as having put in an installation which (did not?) comply with War Office Specification. The () enquiry consisted as far as I remember of a General R.E, a Ventilating Expert (also in a brass hat) a Tunnelling Engineer and several other officials and a Junior Subaltern whose business it had been to make the report upon which the enquiry was held.

The first question to be settled was the safety of the roof over the Constitutional Club Cave. I could not understand

what they were talking about but I finally pointed out that the place where we were standing marked on the plan as C.6. was not the Cave in question and great surprise was felt at this, and we proceeded to the correct place. Here the Subaltern said that the roof was only 4ft thick and a long consultation took place upon the depth to which a bomb dropped from an aeroplane would go into the ground above. As, however, I knew that the sand above this Cave was about 20ft thick, I was again able to ensure the O.C. that this was not correct. We went round and round in rings for a considerable time and finally came to the cave running alongside the road: there the Subaltern considered that a ventilator going into the tunnel containing the road was dangerous as a bomb dropped from an aeroplane might by bouncing, or some other method, blow back through this ventilator! I was standing next to the Ventilating Engineer at the time and he said - For heaven's sake say something to prevent them blocking up that hole - so I again butted in and told the O.C. that the outlet of this hole was in the main tunnel where the road was, and was 30ft below the surface of the ground, which surprised them considerably.

We next went to a point marked B.10 on the plan and the O.C. asked whether there were any other questions that needed to be discussed. I again said that I did not know what we were there for at all but that if there were a danger spot in the Caves it was here as there was a brick column put up to support the roof, and it was at this point that the Caves extended underneath the main road. This really upset the appercart to some extent and I do not know quite what steps were finally taken to protect this, beyond sand bagging.

It was getting late so I asked the O. C. whether there was anything he wanted me for: he replied by asking me what on earth I was there for and I explained the position, to which he replied - well if you know as much about your job as you do about the caves, I think we can rest assured that it is in good hands.

It is worthy of note that during the enquiry a tremendous discussion was raging as to the exact position in which we were, the General produced the plan, of which the enclosed is a copy, and standing in the background I remarked - Well Sir if I were you I should not take that plan as being absolutely accurate - to which he replied that I did not know what I was talking about as it was a War Office plan and must be accurate as it had the War Office stamp on it. I then told him how the plan came to be made and that although it might be stamped with the War Office Stamp, I had made the plan and I was not doubtful of its accuracy but merely ventured to say that it might not be as accurate as he thought, to which he replied - that is that the way we are expected to carry on this *** War. I have to hold an enquiry and nobody seems to know anything at all and the only plan upon which I have to proceed is one made for a bet by a total irresponsible person!

I think it is amusing to note that the enquiry then terminated and the Subaltern got it badly in the neck for having wasted the time of the Court.

Footnote added in ink:

Thats what subs are for...!!!!

Comment to Mr. Spranger attached in handwriting to letter:

I would have given you the original language used throughout as it gives bite to the episode but a Lady is typing this.

Siren

There is a hiatus in the production of Siren due to Tex Bennett being unable to continue as editor. Nevertheless one will appear very soon.

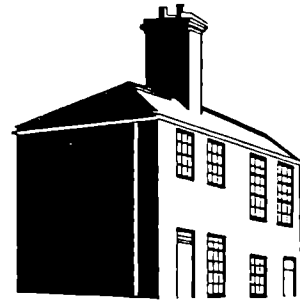
We must all thank Tex for his previous work and hope we can maintain his standards

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NAMHO Field Meet '98

**Hosted jointly by:
The Friends of Killhope
and
The North Pennines
Heritage Trust**



15th to 17th May 1998
Nenthead Village Hall, Nenthead, Alston, Cumbria.

Provisional Programme

Surface Field Trips

Cowshill and Coptcleugh, Weardale
Allenheads Mine and Village
Mining in the Rookhope Valley
Rotherhope Fell Mine
Nent Valley, mining and geology

Underground Field Trips

Brownley Hill Mine
Rampgill Horse Gin
Killhope Mine
Brewery Shaft winch
Tyne Bottom Mine
Caplecleugh to Rampgill
Smallcleugh Mine
Barhaugh Coal Pit
Rotherhope Fell Mine
Frazer's Hush Mine

ACCOMMODATION

An accommodation list will be sent out with the booking form, it will cover B&B's, hotels, bunkhouses and campsites. A number of touring caravans can be parked in the yard at the back of the Nenthead Mines Centre. If you are thinking of camping, please remember Nenthead is at an altitude of 1400 feet, it can be very cold and snow is not unknown in May.

MEALS

The village pubs and the cafe at Nenthead Mines Centre will be open for meals. Groceries will be available from the village shop or from Alston (4 miles).

SATURDAY NIGHT EVENT

The Saturday evening social gathering will be held in the Village Hall, there will be a meal, bar and an informal slide show. Price of meal £5.

FIELD MEET FEE

There is a fixed field meet fee of £5 for each person attending plus £2 for honorary club membership if BCRA insurance is required (see below).

INSURANCE

Insurance via BCRA is essential in order to ensure adequate cover for the weekend. Attendees who are non-club members or who's club is not insured will be asked to pay an additional £2 for honorary membership of the NPHT.

FURTHER DETAILS AND BOOKINGS

Send for further information, trip details and booking forms from:
Sheila Barker, The Rise, Alston, Cumbria, CA9 3DB